

REMARKS

In the Office Action mailed May 17, 2007, the Examiner rejected claims 28-54 under 35 U.S.C § 103(a) as being unpatentable over U.S. Patent No. 5,261,874 to Castle ("Castle") in view of U.S. Patent No. 6,284,131 to Hogard et al. ("Hogard") and further in view of U.S. Patent No. 5,092,836 to Polaschegg ("Polaschegg").

By this Amendment, Applicants have amended claims 28, 29, 33-35, 37, and 39-47 and have cancelled claims 30-32, 36, 38, and 48-54. Thus, claims 28, 29, 33-35, 37, and 39-47 are currently pending in this application. No new matter is added by this Amendment.

By this Amendment, claim 28, for example, has been amended to recite a "process for controlling blood flow in an extracorporeal blood circuit." Claims 29, 33-35, 37, and 39-47, which depend from claim 28, have similarly been amended to recite processes "for controlling blood flow in an extracorporeal blood circuit." The specification as a whole and the originally-filed claims provide support for these amendments.

Applicant respectfully traverses the Examiner's rejection of claims 28-54 under 35 U.S.C § 103(a) as being unpatentable over Castle in view of Hogard and further in view of Polaschegg. Amended claim 28, for example, is not obvious over Castle, Hogard, and Polaschegg because the applied references fail to teach each and every element of the amended claim 28. In particular, Castle, Hogard, and Polaschegg all at least fail to disclose the claimed process comprising "the steps of: measuring an arterial pressure . . . measuring an angular velocity . . . storing in a memory at least one set flow value of a desired blood flow through said access branch, measured values of arterial pressure and angular velocity, and a calibration function" determined by the variables

“v1, related to the angular velocity of the pump; v2 related to the arterial pressure in the portion of said at least one access branch upstream of the at least one peristaltic pump; and v3, related to an actual flow of blood through said at least one access branch,” as recited in amended claim 28. Castle, Hogard, and Polaschegg also do not disclose a process comprising the step of “executing a control procedure comprising the following sequential operations: calculating an actual flow value by applying said calibration function to the corresponding measured values of arterial pressure and angular velocity; comparing said actual flow value with said at least one set flow value; and comparing the angular velocity with an acceptable maximum angular velocity value which can be imparted to the at least one peristaltic pump” (emphasis added), as recited in amended claim 28.

Castle discloses various methods for extra-corporeally applying radiant energy to flowing blood flowing through a hollow tubular conduit and fails to disclose or suggest a “process for controlling blood flow in an extracorporeal blood circuit” comprising any of the steps recited in amended claim 28. The Examiner contends that Hogard teaches a “computer comprising a microprocessor circuit comprising a microprocessor, memory . . . a temperature measurement and interface circuit.” (Office Action at 3.) Hogard, however, does not disclose a “process for controlling blood flow in an extracorporeal blood circuit” comprising any of the steps recited in amended claim 28. The Examiner further contends that Polaschegg “teaches an arterial pressure sensor.” (Id.) Polaschegg, however, similarly fails to disclose a “process for controlling blood flow in an extracorporeal blood circuit” comprising any of the steps recited in amended claim 28.

Accordingly, in light of the deficiencies of Castle, and the failure of Hogard and Polaschegg to overcome those deficiencies, Applicants submit that amended claim 28 is allowable over the applied references. Further, claims 29, 33-35, 37, and 39-47 are allowable at least due to their dependence from allowable amended claim 28.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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By: 

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